

Claims

1. A recombinant microorganism prepared by transferring, to a mutant strain of microorganism from which at least one gene participating in membrane permeation of maltose has been deleted or knocked out, a gene encoding a heterologous protein or polypeptide.

2. The recombinant microorganism as claimed in claim 1, wherein the gene participating in membrane permeation of maltose is a *Bacillus subtilis* gene *glvR* or *glvC* or a gene functionally equivalent to the gene.

3. The recombinant microorganism as claimed in claim 1 or 2, wherein the microorganism is *Bacillus subtilis* or another bacterium belonging to the genus *Bacillus*.

4. The recombinant microorganism as claimed in any one of claims 1 through 3, wherein one or more regions selected from among a transcription initiation regulatory region, a translation initiation regulatory region, and a secretion signal region is ligated to an upstream region of a gene encoding a heterologous protein or polypeptide.

5. The recombinant microorganism as claimed in claim 4, wherein the one or more regions are three regions constituted by a transcription initiation regulatory region, a translation initiation regulatory region, and a secretion signal region.

6. The recombinant microorganism as claimed in claim 4 or 5, wherein the secretion signal region is derived from a cellulase gene of a bacterium belonging to the genus *Bacillus*

and the transcription initiation regulatory region and the translation initiation regulatory region are each derived from a 0.6 to 1 kb region upstream of the cellulase gene.

7. The recombinant microorganism as claimed in claim 5, wherein the three regions constituted by the transcription initiation regulatory region, the translation initiation regulatory region, and the secretion signal region are a nucleotide sequence of base numbers 1 to 659 of a cellulase gene of SEQ ID NO: 1; a nucleotide sequence of base numbers 1 to 696 of a cellulase gene of SEQ ID NO: 3; a DNA fragment having a nucleotide sequence having 70% homology with either of these nucleotide sequences; or a DNA fragment having a nucleotide sequence lacking a portion of any one of these nucleotide sequences.

8. A method for producing a protein or polypeptide by employment of a recombinant microorganism as defined in any one of claims 1 through 7.

9. A method for producing a protein or polypeptide, characterized by comprising culturing a recombinant microorganism as defined in any one of claims 1 through 7 in a culture medium containing maltose.